DOPPLER VELOCITY LOG

DVL1000 - 4000 m

Bottom-track from over 0.2 to 75 m range; 4000 m max. operational depth

The DVL1000 is the world's smallest commercially available Doppler Velocity Log. It combines compact design with unprecedented functionality, being able to fly higher in the water column and closer to the seabed than similar equipment. It has a maximum operational depth of 4000 m and is ideally suited for subsea navigation where size and weight are a concern. This 1 MHz Doppler Velocity Log is used by industry leaders in the subsea market because of its high accuracy and state-of-the-art technology.

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Highlights

- Industry's smallest DVL
- Bottom track from 0.2-75 m range
- Quality estimates - per beam and ping

Applications

- Observation-class ROVs and AUVs
- Near-bottom operations
- Highly accurate subsea surveys
- Easy integration with high-grade INS

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Technical specifications

Bottom velocity	
Single ping std @ 3 m/s	0.5 cm/s
Long-term accuracy	±0.1% / ±0.1 cm/s
Minimum altitude	0.2 m
Maximum altitude	75 m
Velocity resolution	0.01 mm/s
Maximum ping rate	8 Hz max
Water tracking	
Minimum accuracy	0.3% of measured value ± 0.3 cm/s
Minimum range	2.0 m
Current profiling	
Minimum accuracy	0.3% of measured value ± 0.3 cm/s
Velocity resolution	0.1 cm/s
Interval	User-specified Nth ping
Maximum range	30 m
Blanking	0.1 m
Cell size	0.2-2.0 m
Max # cells	150
Environmental	
Operating temperature	-4 to +40 °C
Storage temperature	-20 to +60 °C
Mechanical	
Depth rating	4000 m
Weight	2.7 kg
Weight in water	1.7 kg

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Mechanical	
Height	164 mm
Diameter	ø114 mm
Hardware	
Frequency of operation	1 MHz
Beam width 2.9°	2.9°
Configuration	4-beam Janus array convex transducer, 25° beam angle
Internal memory	16 GB / 64 GB optional
Interfaces	
Serial (either serial or ethernet)	Configurable RS232 or RS422, 8-pin male
Ethernet	10/100 Mbits Auto MDI-X.TCP/IP, UDP/IP, HTTP protocols. Fixed IP / DHCP client /Auto IP address assignment. UPnP and Nortek proprietary instrument discovery over Ethernet. IEEE1588/PTP and NTP for absolute time stamping.Multiple simultaneous data format transmission possible.
Data formats	Nortek proprietary w/ 1 ms time stamp accuracy, NMEA0183, Variants of PDx
Trigger	Internal 1, 2, 3, 4, 5, 6, 7 or 8 Hz or Trigger In. Trigger option through command (Ethernet or serial) External TTL or 485 lines: (configurable Rising/Falling/Edges)
Sensors	
Pressure	0.1% FS /precision better than 0.002% of full scale per sample
Temperature	-4° to +40 °C ± 0.1 °C
Power	
DC input	12-48 V
Maximum peak current	1.5 A
Average power	1.3 W
Materials	

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Standard models

POM and titanium housing